WHAT IS CLAIMED IS:

1. A photothermographic material comprising: a support and an image-forming layer comprising a non-photosenisitive silver salt, a photosensitive silver halide, a binder, and a reduction agent disposed on the support,

wherein a silver iodide content in the photosensitive silver halide is in a range from 40 mol% to 100 mol%; and

an average sphere-equivalent diameter of the photosensitive silver halide is in a range from 0.3 μm to 5.0 μm.

2. The photothermographic material of claim 1, further comprising a compound which after thermal development substantially reduces visible light absorption caused by the photosenisitive silver halide.

3. The photothermographic material of claim 2, wherein the compound which after thermal development substantially reduces visible light absorption caused by the photosenisitive silver halide is a silver iodide complex forming agent.

4. The photothermographic material of claim 1, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular grains having an aspect ratio of from 2 to 100.

5. The photothermographic material of claim 3, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular silver halide grains having an aspect ratio of from 2 to 50 and being deposited with a silver salt in an epitaxial growth manner.

6. The photothermographic material of claim 3, wherein at least 50%, in terms of a projected area, of the photosensitive silver halide is occupied by tabular silver halide grains having an aspect ratio of from 2 to 50 and having one or more dislocation lines respectively.

7. The photothermographic material of claim 3, wherein the silver iodide complex forming agent is a compound represented by one of the following formulas (1) and (2):

Formula (1) Formula (2)

$S(Z)_n$

wherein, in the formula (1), Y represents a non-metallic atomic group necessary for forming a 5- to 7-membered heterocycle containing at least one of a nitrogen atom and a sulfur atom;

the heterocycle formed by Y may be saturated or

unsaturated, or may have a substituent; and

substituents on the heterocycle formed by Y may be combined with each other to form a ring; and

wherein, in the formula (2), Z represents a hydrogen atom or a substituent;

n represents an integer of 1 or 2,

when n represents 1, S and Z are combined with each other by a double bond;

when n represents 2, S and each of two Zs are combined with each other by a single bond;

when n represents 1, Z does not represent a hydrogen atom; and

when n represents 2,two Z's may be same as, or different from, each other, but neither of the two Zs represents a hydrogen atom.

8. The photothermographic material of claim 5, wherein the silver salt is silver chloride or silver bromide.

9. The photothermographic material of claim 1, wherein the photosensitive silver halide contains silver iodide in an amount from 70 mol% to 100 mol%.

10. The photothermographic material of claim 1, wherein the average sphere-equivalent diameter of the photosensitive

silver halide is in a range from 0.4 μm to 3.0 μm.

11. The photothermographic material of claim 1, further comprising at least one type of compound having an adsorptive group to the photosensitive silver halide and a reducing group, or a precursor thereof.

12. The photothermographic material of claim 11, further comprising a compound represented by the following formula (I) as the compound having an adsorptive group and a reducing group:

Formula (I)

$A-(W)_n-B$

wherein A represents a group adsorbable to silver halide (hereinafter referred to simply as "adsorptive group");

W represents a divalent linking group;

n represents 0 or 1; and

B represents a reducing group.

13. The photothermographic material of claim 1, further comprising a compound in which a one-electron-oxidized form generated by an oxidizing of one electron therein can release one or more electrons.

14. The photothermographic material of claim 1, further

comprising a development accelerator.

15. The photothermographic material of claim 1, further comprising at least one type of phthalic acid or a derivative thereof.

16. The photothermographic material of claim 1, wherein the image-forming layer is provided on each side of the support.

17. The photothermographic material of claim 15, imagewise exposed by using an X-ray intensifying screen,

wherein, when exposure is conducted with an exposure quantity in a range from 0.005 lux·second to 0.07 lux·second by using a monochromatic light which has a same wavelength as that of a main luminescent peak of the X-ray intensifying screen and a half bandwidth of 15±5 nm, an image density to be obtained by removing an image-forming layer provided on a side opposite to an exposed face from the support becomes minimum density plus 0.5.

18. The photothermographic material of claim 1, further comprising an ultraviolet ray-absorbing agent.

19. The photothermographic material of claim 1, exposed by using an X-ray intensifying screen having a luminescent peak

in an ultraviolet region.

20. The photothermographic material of claim 1, comprising the image-forming layer provided only on one surface of the support, wherein, when exposure is conducted by using an X-ray intensifying screen and a monochromatic light which has a same wavelength as that of a main luminescent peak of the intensifying screen and a half bandwidth of 15±5 nm, an image density after thermal development becomes minimum density plus 0.5 at a time of an exposure quantity of from 0.01 lux·second to 0.07 lux·second, and an image contrast after thermal development is in a range from 3.0 to 5.0.